

OTTER UNIT

DENIAL OF UNIT APPLICATION

FINDINGS AND DECISION OF THE DIRECTOR

DIVISION OF OIL AND GAS

UNDER DELEGATION OF AUTHORITY FROM THE COMMISSIONER

DEPARTMENT OF NATURAL RESOURCES

STATE OF ALASKA

MAY 23, 2013

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I. INTRODUCTION AND DECISION SUMMARY

This is the decision of the Director of the State of Alaska (State) Department of Natural Resources (DNR), Division of Oil and Gas (Division) pursuant to a September 30, 1999 delegation of authority from the DNR Commissioner on the January 16, 2013, application of Cook Inlet Energy, LLC (CIE) to form the Otter Unit (OU) area (Application). CIE is the proposed OU Operator and sole working interest owner (WIO) of the proposed unit area.

It is not in the public interest to approve formation of the Otter Unit at this time. CIE requests unit approval based on indefinite proposals to drill an exploration well by re-entering an existing well or by drilling a new exploration well. While CIE suggests that if the exploration well is successful, CIE will also drill a delineation well and apply to form a PA, it is not in the public interest to approve a unit in return for a commitment to drill an exploration or delineation well. The unit application does not show how unit formation would promote conservation of all natural resources or the prevention of economic and physical waste, and it does not provide for the protection of all parties of interest. AS 38.05.180(p); 11 AAC 83.303.

II. HISTORY OF PROPOSED UNIT AREA

On January 16, 2013, CIE submitted an application to the Division to approve formation of the OU and simultaneously paid the \$5,000.00 unit formation application filing fee, in accordance with 11 AAC 83.306 and 11 AAC 05.010(a)(10)(D), respectively. The Division notified CIE by email dated February 15, 2013, that the Application was complete. The Application included: the unit operating agreement; confidential geologic, geophysical, and engineering data; Exhibit A which is a description of the proposed unit area, its leases, and ownership interests; Exhibit B which is a map of the proposed unit; Exhibit G which is an initial unit Plan of Development; and the State Model Unit Agreement with proposed modifications. The Application also included an initial Plan of Exploration which extends from March 31, 2013 to March 31, 2015. CIE sets forth the following details of proposed operations for the Initial Plan of Exploration (POE) period.

- CIE was not able to complete the initial exploration well it drilled in the area to planned TD and was not able to fully test the potential of the Beluga formation. CIE is evaluating options to reenter and deepen the Otter #1 Well to fully test the potential of the Beluga formation and possibly the Upper Tyonek formation. The options under evaluation include reentering the well with a coiled-tubing unit or conventional rig. Should these operations be deemed viable, CIE plans to undertake one of these operations during the first year of the Initial Plan Period, i.e. by March 31, 2014. Availability of the appropriate coiled-tubing unit or rig would be essential. As there is still uncertainty as to both the mechanical viability of these options and the availability of the necessary equipment, CIE is not prepared to commit to these operations at this time.
- CIE, should the above operations not be viable or necessary equipment is not available, commits to the drilling of an additional exploratory gas well testing

the Beluga formation on either Unit Tract 1 or Unit Tract 2, prior to March 31, 2015. If CIE is not successful in drilling a well penetrating the entire Beluga formation prior to March 31, 2015, the Otter Unit will terminate and all expired leases not otherwise held will immediately be surrendered to the state.

CIE also offers the following development activities beyond the Initial POE period.

- Should an exploratory gas well be successful, CIE plans to drill a delineation gas well testing the Beluga formation in either Tract 1 or Tract 2, prior to March 31, 2016. If CIE is not successful in drilling this well, the Otter Unit terminates and all expired lease not otherwise held will immediately be surrendered to the state.
- Should CIE's exploratory and/or delineation wells be successful, CIE plans to apply for an Initial Participating Area ("PA") or Tract operations. If CIE fails to apply for an Initial PA or Tract operation by May 31, 2016, the Otter Unit will terminate and all expired leases not otherwise held will immediately be surrendered to the state.
- CIE hopes to establish production from the Otter Unit under a PA or Tract operation soon after a well is drilled that is capable of producing in paying quantities. Concurrent with CIE's drilling operations, CIE will continue working diligently to permit a gas pipeline capable of carrying gas production to the nearest common carrier pipeline. Upon approval of a Tract operation or PA, CIE will construct the pipeline and necessary facilities for processing gas production into a sales-quality product for shipment via pipeline.

The Division published a public notice in the *Anchorage Daily News* and *Peninsula Clarion* on February 22, 2013, under 11 AAC 83.311. Copies of the Application and the public notice were provided to interested parties. The Division provided public notice to, among others, the Alaska Department of Fish and Game; the Kenai Peninsula Borough; the City of Kenai; the Village of Tyonek; the Salamatof Native Association; Cook Inlet Region, Incorporated; the Tyonek Postmaster; and the radio stations KSRM and KDLL in Kenai. The notice was also published on the State of Alaska Public Notice website and the Division's website. The public notices invited interested parties and members of the public to submit comments by March 25, 2013. The Division received no comments during the public notice period.

The proposed OU comprises portions of four state oil and gas leases. Leases ADL 390579 and ADL 390749, issued July 1, 2005 and October 1, 2006 respectively, were acquired from Pacific Energy Resource Ltd. (Pacific) under a seven-year lease term. Lease ADL 390579 is beyond its primary term, but the term was extended by operations related to drilling and the lease is now due to expire on October 1, 2013. The primary term of lease ADL 390749 ends September 30, 2013. Leases ADL 391621 and ADL 391624 were acquired by CIE in the 2010 Cook Inlet lease sale and expire in 2018. The total area of the four leases encompasses 13,324 acres; the proposed unit is comprised of 5,855 acres. CIE's leases and proposed unit acreage lie partly within the Susitna Flats State Game Refuge (Refuge). Oil and gas development is allowed within the Refuge.

A map of the area proposed to be unitized is found in Attachment 2, details of the leases are

found in Attachment 1, and the leases are summarized in Table 1.

Table 1 – ADLs Proposed for Formation of OU

Lease No. (ADL & Tract #)	Acres	Royalty	Lease Effective Date	WIO	Lease Expiration Date	Legal Description
390579 – Tract 1	2,400	12.50%	6/1/2005	Cook Inlet Energy – 100%	5/31/2012	T. 14., R. 10W Seward Meridian, Alaska Sec 1: Unsurveyed, NE1/4, S1/2 Sec 2: Unsurveyed, SE1/4 Sec 11: Unsurveyed, All Sec 12: Unsurveyed, All Sec 13: Unsurveyed, N1/2 Sec 14: Unsurveyed, NE1/4
390749 – Tract 2	1,882	12.50%	10/1/2006	Cook Inlet Energy – 100%	9/30/2013	T. 14., R. 9W Seward Meridian, Alaska Sec 5: Unsurveyed, W1/2 Sec 6: Unsurveyed, All Sec 7: Unsurveyed, All Sec 8: Unsurveyed, W1/2
391621 – Tract 3	1,103	12.50%	3/1/2011	Cook Inlet Energy – 100%	2/28/2018	T. 14., R. 9W Seward Meridian, Alaska Sec 17: Unsurveyed, W1/2 Sec 18: Unsurveyed, All Sec 20: Unsurveyed, NW1/4
391624 – Tract 4	470	12.50%	3/1/2011	Cook Inlet Energy – 100%	2/28/2018	T. 15., R. 10W Seward Meridian, Alaska Sec 31: Unsurveyed S1/2 Sec 32: Unsurveyed, SW 1/4
Total Acreage 5,855.00 acres						

CIE owned or licensed 2-D seismic surveys over 45 miles used in defining the Otter structure and, on May 18, 2012, they spud the Otter No. 1 well on lease ADL 390579. The Division issued a lease extension by drilling pursuant to paragraph 4(c) of the lease agreement, AS 38.05.180(m), and 11 AAC 83.125 on June 14, 2012 to extend ADL 390579 beyond its primary term. On July 17, 2012, the well reached a total depth of 5,685 feet which was roughly 1,400 feet short of the planned bottomhole depth of 7,100 feet. CIE cited problems with the rig's mud pumps for drilling short of the intended bottomhole location.

Throughout the fall of 2012, CIE attempted several operations to initiate gas production from the Otter No. 1 well. CIE continued to clean and test the well until freezing problems with the well required CIE to suspend drilling operations on the well. CIE submitted to the Division the Otter Unit Application on January 16, 2013 and plugged the Otter No. 1 well the next day, January 17, 2013. On February 15, 2013, CIE requested a suspension of operations for ADL 390579 which was granted by the Division on March 8, 2013. The suspension of operations was effective until March 31, 2013 and CIE has been given six months, as provided under paragraph 4(e) of the

lease agreement, after the suspension was lifted to restart operations on the lease or the lease will expire. At the time of this decision, CIE has not restarted operations on the Otter No. 1 well.

III. STATUTORY AND REGULATORY PROVISIONS RELEVANT TO THE APPLICATION

The statutory standard for unitization is whether it is necessary or advisable in the public interest:

To conserve the natural resources of all or a part of an oil or gas pool, field, or like area, the lessees and their representatives may unite with each other, or jointly or separately with others, in collectively adopting or operating under a cooperative or a unit plan of development or operation of the pool, field, or like area, or a part of it, when determined and certified by the commissioner to be necessary or advisable in the public interest.

AS 38.05.180(p); (emphasis added). The legislature has also identified several aspects of the public interest with regard to the state oil and gas leasing program:

(a) The legislature finds that

(1) the people of Alaska have an interest in the development of the state's oil and gas resources to

(A) maximize the economic and physical recovery of the resources;

(B) maximize competition among parties seeking to explore and develop the resources;

(C) maximize use of Alaska's human resources in the development of the resources;

(2) it is in the best interests of the state

(A) to encourage an assessment of its oil and gas resources and to allow the maximum flexibility in the methods of issuing leases to

(i) recognize the many varied geographical regions of the state and the different costs of exploring for oil and gas in these regions;

(ii) minimize the adverse impact of exploration, development, production, and transportation activity; and

(B) to offer acreage for oil and gas leases, specifically including

(i) state acreage that has been the subject of a best interest finding at annual areawide lease sales; and

(ii) land in areas that, under (d) of this section, may be leased without having been included in the leasing program prepared and submitted under (b) of this section.

AS 38.05.180. Unitization extends the primary term of a lease. Alaska statute 38.05.180(m) provides in relevant part:

An oil and gas lease shall be automatically extended if and for so long thereafter as oil or gas is produced in paying quantities from the lease or if the lease is committed to a unit approved by the commissioner, and a gas only lease shall be automatically extended if and for so long thereafter as gas is produced in paying quantities from the lease or if the lease is committed to a unit approved by the commissioner.

DNR has set forth unitization decision criteria in regulation that retain the public interest as the primary criterion:

11 AAC 83.303. Criteria. (a) The commissioner will approve a proposed unit agreement for state oil and gas leases if he makes a written finding that the agreement is necessary or advisable to protect the public interest considering the provisions of AS 38.05.180 (p) and this section. The commissioner will approve a proposed unit agreement upon a written finding that it will

(1) promote conservation of all natural resources, including all or part of an oil or gas pool, field, or like area;

(2) promote the prevention of economic and physical waste; and

(3) provide for the protection of all parties of interest, including the state.

(b) In evaluating the above criteria, the commissioner will consider

(1) the environmental costs and benefits of unitized exploration or development;

(2) the geological and engineering characteristics of the potential hydrocarbon accumulation or reservoir proposed for unitization;

(3) prior exploration activities in the proposed unit area;

(4) the applicant's plans for exploration or development of the unit area;

(5) the economic costs and benefits to the state; and

(6) any other relevant factors, including measures to mitigate impacts identified above, the commissioner determines necessary or advisable to protect the public interest.

(c) The commissioner will consider the criteria in (a) and (b) of this section when

evaluating each requested authorization or approval under 11 AAC 83.301 – 11 AAC 83.395, including

- (1) an approval of a unit agreement;
- (2) an extension or amendment of a unit agreement;
- (3) a plan or amendment of a plan of exploration, development or operations;
- (4) a participating area; or
- (5) a proposed or revised production or cost allocation formula.

Potential “hydrocarbon reservoir,” “reservoir,” and “unit” are defined by regulation as follows:

11 AAC 83.395. Definitions.

Unless the context clearly requires a different meaning, in 11 AAC 83.301 – 11 AAC 83.395 and in the applicable unit agreements

....

(5) "potential hydrocarbon accumulation" means any structural or stratigraphic entrapping mechanism which has been reasonably defined and delineated through geophysical, geological, or other means and which contains one or more intervals, zones, strata, or formations having the necessary physical characteristics to accumulate and prevent the escape of oil and gas;

(6) "reservoir" means an oil or gas accumulation which has been discovered by drilling and evaluated by testing and which is separate from any other accumulation of oil and gas;

(7) "unit" means a group of leases covering all or part of one or more potential hydrocarbon accumulations, or all or part of one or more adjacent or vertically separate oil or gas reservoirs, which are subject to a unit agreement.

State regulation also sets out the requirements for acceptable plans of exploration and development in 11 AAC 83.341(a) and 343(a):

11 AAC 83.341. Unit plan of exploration.

(a) Unless a unit plan of development is filed under 11 AAC 83.343, a unit plan of exploration must be filed for approval by the commissioner as an exhibit to the unit agreement under 11 AAC 83.306. The plan must describe the applicant's proposed exploration activities, including the bottom-hole locations and depths of proposed wells, and the estimated date drilling will commence. All exploration operations must be

conducted under an approved plan of exploration. The commissioner will approve a unit plan of exploration if it complies with the provisions of 11 AAC 83.303. If the proposed unit plan of exploration is disapproved, the commissioner will, in his discretion, propose modifications which, if accepted by the unit operator, would qualify the plan for approval.

11 AAC 83.343. Unit plan of development.

(a) A unit plan of development must be filed for approval as an exhibit to the unit agreement if a participating area is proposed for the unit area under 11 AAC 83.351, or when a reservoir has become sufficiently delineated so that a prudent operator would initiate development activities in that reservoir. All development operations must be conducted under an approved plan of development. A unit plan of development must contain sufficient information for the commissioner to determine whether the plan is consistent with the provisions of 11 AAC 83.303. The plan must include a description of the proposed development activities based on data reasonably available at the time the plan is submitted for approval as well as plans for the exploration or delineation of any land in the unit not included in a participating area. The plan must include, to the extent available information exists

(1) long-range proposed development activities for the unit, including plans to delineate all underlying oil or gas reservoirs, bring the reservoirs into production, and maintain and enhance production once established;

(2) plans for the exploration or delineation of any land in the unit not included in a participating area;

(3) details of the proposed operations for at least one year following submission of the plan; and

(4) the surface location of proposed facilities, drill pads, roads, docks, causeways, material sites, base camps, waste disposal sites, water supplies, airstrips, and any other operation or facility necessary for unit operations.

IV. DISCUSSION OF DECISION CRITERIA

The primary statutory decision criterion for unitization is whether approval is necessary or advisable in the public interest to conserve oil and gas resources. AS 38.05.180(p). Conservation of the natural resources of all or part of an oil or gas pool, field or like area means “maximizing the efficient recovery of oil and gas and minimizing the adverse impacts on the surface and other resources.” 11 AAC 83.395(1).

The primary regulatory decision criterion for a unitization application is the public interest. 11 AAC 83.303(a). The Commissioner will approve a proposed unit if he finds that it necessary and advisable in the public interest and unitization will: (1) promote conservation of all natural resources, including all or part of an oil or gas pool, field, or like area; (2) promote the

prevention of economic and physical waste; and (3) provide for the protection of all parties of interest including the state. 11 AAC 83.303(a). In evaluating the 11 AAC 83.303(a) criteria, the Commissioner will consider: (1) the environmental costs and benefits of unitized exploration or development; (2) the geological and engineering characteristics of the potential hydrocarbon accumulation or reservoir proposed for unitization; (3) prior exploration activities in the proposed unit area; (4) the applicant's plans for exploration or development of the unit area; (5) the economic costs and benefits to the state; and (6) any other relevant factors, including measures to mitigate impacts identified above, the commissioner determines necessary or advisable to protect the public interest. 11 AAC 83.303(b).

A. 11 AAC 83.303(b) Decision Considerations

This section discusses the 11 AAC 83.303(b) factors that should be considered before applying the decision criteria under 11 AAC 83.303(a).

1. 303(b)(1) - Environmental Costs and Benefits

Unitization may provide an environmental benefit by enabling joint development of multiple lessees thereby reducing redundant development. Unitization may reduce the need to drill a well or to build production facilities on every lease overlying a common reservoir or closely-situated reservoirs. Less development may benefit the environment by reducing surface impacts. It is not apparent from the Application, however, how formation of the OU would generate significant environmental benefits.

The Application does not set forth enough information to support a conclusion that unitization will increase environmental benefits. The Application states that two gravel pads will be built during the initial plan period (2013-2015), in addition to the drill pad already constructed for the Otter No. 1 well, if unitized. CIE claims that, at a minimum, four pads will be needed to develop the prospect on a lease-by-lease basis where unitized development will require no more than three pads. It is assumed the four pads would be necessary to drill a well in each lease to extend the term of the lease. However, lease-by-lease development does not direct the drilling of all leases overlying a reservoir. Leases will automatically extend if and for so long thereafter as oil and gas is produced in paying quantities from the lease. AS 38.05.180(m). Therefore, development can be conducted on a lease-by-lease basis without drilling each lease if the lease is actually contributing to production.

The proposed formation of the unit also will not provide a significant joint development benefit of pulling different lessees together in a common development. CIE is the single WIO of the leases in the proposed unit area. Thus, CIE does not need to unitize the leases in order to effect joint development.

2. 303(b)(2) - Geological and Engineering Characteristics

The proposed Otter Unit is located onshore on the west side of Cook Inlet approximately nine miles north of Beluga River field and five miles west of the Lewis River gas field. The closest

hydrocarbon production is from the Pretty Creek field approximately 3.5 miles southeast of the Otter structure.

The geological trap consists of a northeast-southwest trending anticline located in the downthrown footwall of a northeast striking, northwest dipping reverse, or high-angle thrust fault. The fault is in the area of interaction between the regionally-extensive Bruin Bay and Castle Mountain fault systems. Sandstones comprising the prospective sandstone reservoirs are Tertiary in age and were deposited by non-marine fluvial systems. Structural closure is established with the interpretation of regional 2-D seismic lines.

The Otter No. 1 well was permitted to a total depth of 7,100 feet (MD and TVD), but due to drilling problems was shortened to a total measured depth of 5,686 feet. Both the Sterling and Beluga formations were penetrated by the borehole. Gas shows were encountered in sandstones at several distinct horizons and perforations were shot in an attempt to complete the well. Initial testing of the perforated interval failed to produce measurable quantities of hydrocarbons. In an attempt to stimulate production, hydraulic fracturing was performed on the lower perforated interval, but has been of limited success to date. In summary, CIE has been unable to provide evidence of a reservoir at the Otter structure. However, the structural trapping configuration mapped from seismic data and multiple sandstone horizons with gas shows clearly indicate a potential hydrocarbon accumulation.

3. 303(b)(3) – Prior Exploration Activities

CIE owns or has licensed approximately 45 miles of 2-D seismic comprised of seven dip and strike lines used in defining the Otter structure. The data are of differing quality and vintages, but the Application concludes that, in their entirety, the data demonstrate a reasonable interpretation of the Otter structure.

Two wells have been drilled in the proposed unit area. The most recent well is the CIE Otter No. 1 well which was spud on May 19, 2012, at a location 2,081 feet FNL and 1,805 feet FEL of Sec. 12, T. 14 N, R. 10 W, SM Alaska. The other well in the area is the Texas International Pretty Creek State No. 1 located approximately 0.9 miles to the northwest in Sec 2 of T 14 N, R 10 W. It was spud on December 16, 1974, and reached a total measured depth of 6,570 feet in the Tyonek Formation. The interval from 6,009 to 6,014 feet was perforated but upon testing failed to produce measurable quantities of gas. The Pretty Creek State No. 1 well penetrated the hanging wall of the “Otter” reverse fault, encountering different facies in the Sterling, Beluga, and Tyonek formations from the Otter No. 1 well.

4. 303(b)(4) - Applicant’s Plans for Development of the Proposed Otter Unit

The Initial POE states CIE may proceed with re-entering and deepening the Otter well or drilling a new exploration well in Tract 1 or 2 between March 31, 2013 and March 31, 2015. The Initial POE’s proposed operations only include drilling or re-entering exploratory wells to test the potential of formations. CIE is not committing to develop a proven reservoir. CIE has proposed equal or fewer activities for the Initial POE period than have been conducted over the last six months of 2012. All of those activities are aimed at exploration work. At a minimum, CIE is

committing to re-enter the Otter No. 1 well to deepen the well approximately 900 feet to penetrate the entire Beluga formation prior to March 31, 2015.

The long-range development plans include applying for a PA or tract operation if the exploratory and/or delineation well are successful. There are no plans to drill Tracts 3 or 4 of the proposed unit within the Initial POE or long-range development timelines. If CIE re-enters the Otter No. 1 well and penetrates the entire Beluga formation, CIE may hold the proposed unit area until March 31, 2016 without conducting any other activities. Simply deepening the Otter No. 1 well to its original proposed total depth over a three-year period is not an adequate approach to development of state resources. Further, the long-term commitment to apply for a PA or Tract Operation is a regulatory requirement rather than a development proposal. The Application does not show that unitization would lead to development of state resources differently than lease-by-lease development.

5. 303(b)(5) - The Economic Costs and Benefits to the State

DNR has an obligation to protect the public's interest in maximizing economic and physical recovery from the state's oil and gas resources. AS 38.05.180(a)(1)(A). Maximizing economic recovery of hydrocarbons ensures royalty revenues and increased employment opportunities over the long-term. Realization of these potential benefits requires exploration and development of state oil and gas properties. CIE drilled a well to explore the Otter prospect which was identified through 2-D seismic data. Swabbing and hydraulic fracturing operations were performed for months after drilling ceased to trigger production of hydrocarbons from the Otter No. 1 well. The well did not flow to the surface and it was suspended. There is a possibility of economic recovery of hydrocarbon from the Otter prospect which could lead to increased economic benefits for the state, but more exploration work is needed to confirm a proven reservoir. The proposed operations are exploratory.

The State is also required to maximize competition among parties in oil and gas development. AS 38.05.180(a)(1)(B). Without firm development proposals, unitization of the proposed area would not enhance competition or effect development. Unitizing the Otter prospect leases would extend the primary term of two leases. The Initial POE will allow CIE to hold these leases until at least 2016 without promise of development activities. The proposed unit would also include portions of two leases which expire in 2018. The proposal is that a unit be approved in return for the drilling of one or two exploration wells which could include re-entering Otter No. 1 well. It is not necessary to form a unit to accomplish the proposed exploration activities as those activities are not different than developing on a lease-by-lease basis. Extending leases through unitization with limited commitments to development thwarts competition and forecloses other parties from an opportunity to explore and develop the land. In this case, unitization will extend the leases beyond their primary term with no clear development commitment, and unitization in these circumstances may be contrary to the statutory mandate that the state maximize return and competition.

6. 303(b)(6) - Other Relevant Factors

The Application proposes to include two expiring leases within the proposed OU. These leases, ADL 390579 and 390749, were acquired in the 2004 and 2005 Cook Inlet lease sales by CIE's predecessor, Pacific. CIE acquired all of Pacific's assets through bankruptcy proceedings in 2009 and both leases were assigned to CIE on December 15, 2009. CIE was issued two adjoining leases through the 2010 Cook Inlet lease sale which, together with the assigned leases, comprises the proposed OU area. All the leases have seven-year primary terms. The mid-term lease acquisition provided CIE with three to four years to explore the Otter prospect. Within three years of acquiring the leases, CIE drilled a well to explore the Otter prospect.

Due to mechanical problems with the rig's mud pumps, CIE was unable to drill to the proposed bottomhole location at 7,100 feet MD. The Otter No. 1 well was hydraulically fractured, tested, and swabbed for several months in an attempt to stimulation production. Cessation of drilling operations did not allow CIE to evaluate potentially producible intervals within part of the Beluga formation and sections of the lower Tyonek as proposed. CIE may deepen the well after evaluating new techniques to fully drill and test the formations. By letter dated March 8, 2013, the Division extended the lease term of ADL 390579 under 11 AAC 82.670 and Paragraph 4(e) of the lease, thus ongoing drilling and production operations extend the lease preventing the lease from expiring without unitizing.

CIE will have until October 1, 2013 to resume operations on ADL 390579, whereby the lease can be extended under 11 AAC 83.125 and Paragraph 4(c)(1) of the lease. Lease-by-lease development will require CIE to attempt to produce gas from the Otter No. 1 well or begin drilling a new exploratory well on the lease in 2013. Unitization would give CIE until March 31, 2015 to redrill the Otter No. 1 well or drill a new exploratory well in Tract 1 or 2 through the entire Beluga formation. Unitization will not encourage more efficient exploration and development of state resources than lease-by-lease development for the proposed Otter Unit.

B. 11 AAC 83.303(a) Decision Criteria

State regulation provides that the commissioner will approve a unit agreement or unit plan if he finds that it will promote the conservation of natural resources, that it will prevent economic and physical waste, that it will provide for the protection of all parties in interest including the state, and that it is necessary and advisable in the public interest. 11 AAC 83.303(a). This section addresses those decision criteria.

1. 303(a)(1) – Promote the Conservation of all Natural Resources

Alaska statute authorizes the DNR to approve an agreement among multiple lessees that hold separate leases overlying a common reservoir to jointly develop the leases for the purpose of conserving the natural resources of all or a part of an oil or gas pool, field, or like area. AS 38.05.180(p). In this context, "conservation" means "maximizing the efficient recovery of oil and gas and minimizing the adverse impacts on the surface and other resources." 11 AAC 83.395(9).

The Application states that, through unitization, the Beluga formation can be explored and developed with minimal impacts. CIE claims fewer pads would be needed to develop the four leases if the leases were unitized versus lease-by-lease development. This assumes each lease will need to be drilled to be held by drilling operations or production. If the Otter structure produces in paying quantities, the leases being drained would be extended automatically for so long as oil and gas is produced in paying quantities. ADLs 391621 and 391624 do not expire until 2018. Thus, no more wells should need to be drilled to hold leases if the Otter structure can be produced and the structure extends to ADLs 391621 and 391624. Ample time would be available to CIE to fully evaluate and develop the resource on a lease-by-lease basis while minimizing surface impacts.

The Application also lacks a plan for maximizing efficient recovery of oil and gas resources. CIE only proposes to deepen the Otter No. 1 well or drill a new exploratory well through the Beluga formation in the next two years. The work commitment for the Initial POE only proposes to explore the prospect from expiring leases. Unitization is not necessary where the only commitment is to drill exploration wells. The Application does not show that unitization would affect efficient recovery of oil or gas differently than lease-by-lease development.

The unitization of oil and gas reservoirs or accumulations and the formation of unit areas to develop hydrocarbon-bearing reservoirs or accumulations may work to conserve the reservoir when leases overlying a common reservoir are owned by different parties. Diligent exploration and development under a single approved unit plan without the complications of competing leasehold interests promotes the state's interest. The Application proposes unitization of four leases in which CIE is the sole working interest owner. There are no complicating factors from competing leaseholder interests that prevent CIE from diligently exploring and developing the proposed OU area and adjoining leases. Unitization is not necessary to reconcile the competing interests of multiple lessees in the proposed unit area to avoid excessive or redundant development.

2. 303(a)(2) - Prevention of Economic and Physical Waste

Unitization, as opposed to activity on a lease-by-lease basis, may prevent economic and physical waste by preventing the drilling of wells in excess of the number necessary for the efficient recovery of hydrocarbons or drilling in a manner that results in the improper use of or unnecessary dissipation of reservoir energy through unified reservoir management. Additionally, unitization may otherwise reduce redundant expenditures. The Application reasons that unitization will allow CIE "to rationally explore and develop the Otter structure" pointing out that gas reservoirs in the Beluga formation in Cook Inlet are very susceptible to formation damage and extremely sensitive to both drilling and completion practices. The Application goes on to explain that sound geological, reservoir engineering, and commercial consideration are preferred over drilling wells in locations and sequences intended to hold acreage nearing expiration. However, the Application lacks an explanation of how development would occur differently when these considerations are employed. It is unclear how CIE proposes to conduct orderly, efficient development when proposing one exploration well and one delineation well in the next three years. Thus, the Application does not show that unitization is necessary to prevent economic and physical waste.

3. 303(a)(3) - Protection of all Parties of Interest, Including the State

The people of Alaska have an interest in the development of the state's oil and gas resources to maximize the economic and physical recovery of the resources. AS 38.05.180(a). Unit formation protects the economic interests of the Working Interest Owners (WIO) and the State. Unit formation promotes the state's economic interests because hydrocarbon recovery may be maximized through firm development commitments that are likely to lead to increased production and consequent state revenue.

Unit formation would protect the interests of CIE by extending the term of two leases. This does not necessarily benefit the state. Unitization would hold state acreage with poorly-defined commitments to develop. If unitization is not granted, lease ADL 390579 will be held through suspension of operations and, presumably, drilling operations thereafter. Lease ADL 390749 expires September 30, 2013, if CIE decides not to drill the lease. Simply extending leases beyond their primary term in the absence of development commitments does not result in realization of the purposes of unitization or the state oil and gas leasing program.

Unitization is one of the conditions that allow a lessee to hold a lease beyond its primary term. AS 38.05.180(m). But the purpose of unitization is to effect efficient production and to minimize adverse impacts of oil and gas development. 11 AAC 83.395(1). CIE has drilled a well penetrating the Otter structure identified through 2-D seismic data. The drilling operations were interrupted by mechanical conditions which prevented the rig from drilling to the proposed bottomhole location. CIE can continue operations at Otter No. 1 well under the approved suspension of operations which gives CIE until the end of September to deepen the well and provide evidence of a viable reservoir, but CIE's proposed plan and rationale for unitization does not protect the state's interest.

V. FINDINGS AND DECISION

A. Findings

1. The Application does not set forth enough information to support a conclusion that unitization will provide environmental benefits.
2. CIE is the sole working interest owner of the proposed Otter Unit. The proposed formation of the unit will not provide a significant joint development benefit of pulling different lessees together to avoid excessive or redundant development.
3. The structural closure interpreted from 2-D seismic data and gas shows in multiple sandstone intervals in the Otter No. 1 well indicate a potential hydrocarbon accumulation. However, CIE's completion, stimulation, and testing efforts have not resulted in the recovery of measurable hydrocarbon volumes, calling into question the presence of an accumulation with sufficient gas saturation to constitute a viable reservoir.
4. The Initial POE and long-term development activities do not provide plans for development of state resources.

5. There is a possibility of economic recovery of hydrocarbons from the Otter prospect which would lead to increased economic benefits for the state; however, there is not yet a proven reservoir which CIE has committed to develop.
6. CIE was able to drill a well to explore the Otter prospect within three years of acquiring the leases and continues to attempt to prove up the prospect. Unitization is not necessary to hold the lease if CIE is engaged in drilling and production operations on the leases.
7. The Application does not show that unitization would affect efficient recovery of state resources differently than lease-by-lease development. The work commitment for the Initial POE only proposes to drill one exploration well from an expiring lease.
8. The Application does not include a plan for unified reservoir. Unitization is not the only method of preventing the drilling of excess wells.
9. The Application lacks detailed information or evidence regarding how unitizing would prevent CIE from drilling excess wells or unnecessarily dissipating reservoir energy.
10. Extending leases beyond their primary term in the absence of development commitments does not result in realization of the purposes of unitization or protection the state's interest of encouraging competition.
11. While extending the leases without development operations and approving a limited plan of development is contrary to the state's interest, it is in the best interest of the state for operations to continue on the well site to determine whether the Otter structure is capable of sustained production.
12. CIE's requests to modify the following provisions of the State Model Unit Agreement are inconsistent with lessees' obligations and with DNR's management authority, and the requests are denied: 3.2, 4.3, 8.2, 12.6, 13.2, and 20.4.
13. The application proposes a unit with a single lessee or working interest owner of multiple leases which the model unit agreement is not designed to address, and when a unitization is approved for multiple leases with one lessee or working interest owner, the proposed unit agreement will be treated instead as a general unit plan instead of an agreement that the applicant has agreed to follow and that DNR may approve if unitization is in the public interest.

B. Decision

It is not necessary or advisable in the public interest to approve formation of the Otter Unit at this time. The Application does not further the purposes of unitization or the public interest in oil and gas leasing. The Application proposes unitization in return for a plan to continue exploration of state leases. Unitization will not produce more efficient exploration and development of state resources than lease-by-lease development for the proposed Otter Unit. The Application fails to provide evidence or a plan to show how unitization would maximize the efficient recovery of oil and gas and minimizing the adverse impacts on the surface and other resources, prevent waste, or maximize economic and physical recovery of state resources.

The Application to form the Otter Unit is denied because it does not protect the state or public interest. The Application is denied.

A person affected by this decision may appeal it, in accordance with 11 AAC 02.010 through 11 AAC 02.900. Any appeal must be received within 20 calendar days after the date of "issuance" of this decision, as defined in 11 AAC 02.040 (c) and (d), and may be mailed or delivered to Daniel S. Sullivan, Commissioner, DNR, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to (907) 269-8918, or sent by electronic mail to dnr.appeals@alaska.gov. This decision takes effect immediately. An eligible person must first appeal this decision in accordance with 11 AAC 02.010 through 11 AAC 02.900 before appealing this decision to Superior Court. A copy of 11 AAC 02.010 through 11 AAC 02.900 may be obtained from any regional information office of the Department of Natural Resources.



W.C. Barron
Director
Division of Oil and Gas

5/23/13

Date

ATTACHMENTS

1. Proposed Otter Unit – Exhibit A: Lease Descriptions for proposed Otter Unit (January 16, 2013)
2. Proposed Otter Unit - Exhibit B: Outline of Current Leases and Proposed Otter Unit (January 16, 2013)

ATTACHMENT ONE:

Proposed Otter Unit – Exhibit A: Lease Descriptions for proposed Otter Unit (January 16, 2013)

Unit Tract No.	Lease No.	Legal Description	Tract Acreage	Royalty and Oil/RI Owners	Percentage	Working Interest Owners	NRI Percentage
1	ADL 390579	T. 14N., R. 30W., Seward Meridian Section 1, Unsurveyed, NE 1/4, S 1/2, 480.00 acres; Section 2, Unsurveyed, SE 1/4, 160.00 acres; Section 11, Unsurveyed, All, 640.00 acres; Section 12, Unsurveyed, All, 640.00 acres; Section 13, Unsurveyed, N 1/2, 320.00 acres; Section 14, Unsurveyed, NE 1/4, 160.00 acres.	2,400 acres	State of Alaska Daniel K. Donkel	12.5% 1%	Cook Inlet Energy, LLC	86.50%
2	ADL 390749	T. 14N., R. 9W., Seward Meridian Section 5, Unsurveyed, W 1/2, 320.00 acres; Section 6, Unsurveyed, All, 620.00 acres; Section 7, Unsurveyed, All, 620.00 acres; Section 8, Unsurveyed, W 1/2, 320.00 acres.	1,882 acres	State of Alaska Daniel K. Donkel	12.5% 1%	Cook Inlet Energy, LLC	86.50%
3	ADL 391621	T. 14N., R. 9W., Seward Meridian Section 17, Unsurveyed, W 1/2, 320.00 acres; Section 18, Unsurveyed, All, 620.00 acres; Section 20, Unsurveyed, NW 1/4, 160.00 acres.	1,103 acres	State of Alaska	12.50%	Cook Inlet Energy, LLC	87.50%
4	ADL 391624	T. 15N., R. 9W., Seward Meridian Section 31, Unsurveyed, S 1/2, 310.00 acres; Section 32, Unsurveyed, SW 1/4, 160.00 acres.	470 acres	State of Alaska	12.50%	Cook Inlet Energy, LLC	87.50%
Total Acreage			5,855.00 acres				

ATTACHMENT TWO:

Proposed Otter Unit - Exhibit B: Outline of Current Leases and Proposed Otter Unit
(January 16, 2013)

